

Claims

1. A device for purifying exhaust gases from a combustion engine (1), comprising an arrangement (30) for recirculating exhaust gases from the engine to an air intake (2) thereof, a valve device (12) controlled by a control device (13) for regulating the relation between fresh air and recirculated exhaust gases supplied to the engine, a regenerable filter (8) adapted to catch particulate constituents of the exhaust gases, and means (14) for recording the temperature of the exhaust gases from the engine, the control device (13) being adapted to be supplied with temperature information from said temperature recording means (14), characterized in that the control device (13) is adapted, with the aid of said temperature information and the valve device (12), to regulate the relation between fresh air and recirculated exhaust gases supplied to the engine so as to achieve a relation between NO_x and soot of the exhaust gases from the engine that is favourable for the regeneration of the filter (8).
5
2. A device according to claim 1, characterized in that the control device (13) is adapted, with the aid of said temperature information and the valve device (12), to regulate the relation between fresh air and recirculated exhaust gases supplied to the engine so that a regeneration of the filter (8) will take place at the prevailing temperature level of the exhaust gases.
10
3. A device according to claim 1 or 2, characterized in that the device comprises means (7) for converting NO occurring in the exhaust gases into NO₂.
15
4. A device according to claim 3, characterized in that said converting means comprises a catalyst (7) capable of con-
20

verting NO into NO₂, which is arranged upstream of the filter (8).

5. A device according to claim 3 or 4, characterized in that said converting means comprises a catalytic material capable of converting NO into NO₂, which material is integrated in the filter (8).
10. 6. A device according to anyone of the preceding claims, characterized in that the filter (8) comprises a catalytic material capable of lowering the temperature at which particulate constituents deposited in the filter are ignited and combusted.
15. 7. A method for regulating the relation between supplied fresh air and recirculated exhaust gases of a combustion engine (1) which comprises an arrangement (30) for recirculating exhaust gases from the engine to an air intake (2) thereof, a valve device (12) controlled by a control device (13) for regulating the relation between fresh air and recirculated exhaust gases supplied to the engine and a regenerable filter (8) adapted to catch particulate constituents of the exhaust gases, the temperature of the exhaust gases from the engine being recorded and the control device (13) being supplied with information regarding said temperature, characterized in that the control device (13), with the aid of said temperature information and the valve device (12), regulates the relation between fresh air and recirculated exhaust gases supplied to the engine so as to achieve a relation between NO_x and soot of the exhaust gases from the engine that is favourable for the regeneration of the filter (8).
20. 8. A method according to claim 7, characterized in that the control device (13), with the aid of said temperature information and the valve device (12), regulates the relation

between fresh air and recirculated exhaust gases supplied to the engine so that a regeneration of the filter (8) will take place at the prevailing temperature level of the exhaust gases.

5

9. Use of a device according to anyone of claims 1-6 for purifying exhaust gases from a diesel engine.